

ABSTRACT OF THE INVENTION

~~100561~~100571 A tunable receiver is disclosed including a plurality of select filters to perform an initial band selection, a variable-gain low noise amplifier (LNA) whose gain is controlled to prevent its output power level to exceed a pre-determined power threshold, a plurality of digitally-tunable tracking filters to pass signals within a selected channel and to reject signals in a corresponding image band, a second LNA to further amplify the received RF signal and to generate differential signal outputs, a down converting stage which converts the received RF signal to an IF signal while rejecting signals in the image band, an IF trap to further reject undesired signals present at the output of the down converting stage, an IF amplifier to amplify the IF signal to compensate for losses, an IF filter to provide channel select and reject undesirable signals, and a variable-gain IF amplifier to amplify the IF signal and maintain its power level within specification.